UFMS Risk Assessment and Mitigation Plan

FINAL Version 2

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Author:	KPMG Consulting, Inc.
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KPMG Consulting

Risk Assessment and Mitigation Plan – Revision History

Version	*Date Delivered*	*Comments Provided by*	*Summary of Comments*
Final v1	4/18/02	Gerald Thomas	▪ Incorporated GT's hand-written edits
Final v2	5/10/02	Colleen Barros, NIH; Marc Thomas, CMS	▪ Update UFMS Program Organization diagram as it relates to Risk Management ▪ Revised "Sponsorship" Risk category name ▪ Differentiated PMO UFMS Risk Manager and KPMG Consulting Risk Manager roles ▪ Added "Implement Risk Mitigation Strategy" step ▪ Defined "issue" in the text and in the Glossary ▪ Added "Time Correlation" as a Risk Mitigation Strategy component ▪ Clarified that contingency planning activities would be included in addressing "red" and "yellow" risks

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1.0 Introduction

1.1 UFMS Program Background

The Department of Health and Human Services (HHS) currently operates five accounting systems that do not leverage up-to-date technology. As part of the overall HHS modernization effort, HHS Secretary Tommy Thompson directed that the number of financial management systems be reduced from five to two modern accounting systems: one for the Centers for Medicare & Medicaid Services (CMS) and its Medicare Contractors, and the other to serve the rest of the Department. This overall effort constitutes the Unified Financial Management System (UFMS) program.

Consistent with the Secretary's directive, the UFMS will be comprised of:

(1) the Healthcare Integrated General Ledger Accounting System (HIGLAS) at the Centers for Medicare and Medicaid Services (CMS) and
(2) a unified system for the rest of the Department

The unified system will also include a data repository for consolidating financial data across all HHS component agencies to support HHS-wide financial reporting. In addition, UFMS will integrate pertinent financial information from the Department's administrative systems, including travel management systems, property systems, logistics systems, acquisition/contracting systems, and grant management systems. The overall purpose of the UFMS program is to achieve greater economies of scale, eliminate duplication, and provide better service delivery. Other HHS-wide technological and system efforts, such as Enterprise Infrastructure Management (EIM) and Enterprise Human Resource Planning (EHRP), will necessarily be coordinated with this project.

HHS has established the UFMS Program Management Office (PMO) to oversee the multiple tasks and activities associated with implementing a unified financial management system across the Department. Working with its systems integrator, the UFMS PMO has begun the UFMS business case and pre-implementation planning task. The primary objective of this task is to develop a set of plans that will serve as a roadmap for completing each aspect of the UFMS implementation. This document--the Risk Assessment and Mitigation Plan (RAMP)--is one of those plans and establishes the overall process the UFMS PMO and the systems integrator will use to identify and manage risks factors that have, or may have, a negative impact on the successful completion of the UFMS effort. This document will also be included as an appendix to the UFMS Detailed Implementation Plan (to be delivered at a later date) that the UFMS PMO and KPMG Consulting will use to guide each phase of the UFMS integration effort. Table 1-1 describes the relationship of the RAMP to other planning documents being delivered during the UFMS business case and pre-implementation planning task.

Table 1-1: Relationship of RAMP to other UFMS Implementation Planning Documents

Plan	Relationship
Task Order Management Plan (completed February 11, 2002)	Contains a section (i.e. "Task Order Management" section) that describes project management and control procedures for the UFMS effort, including issue and risk management. The RAMP further details the risk management procedures.
Governance Plan (completed April 11, 2002)	Outlines, at a high level, the roles and responsibilities of the various parties in the UFMS Governance Structure, including the Steering Committee, Planning and Development Committee, and Program Management Office. The RAMP further describes these roles as they relate to risk mitigation.
Change Management Plan	Provides an approach for preparing HHS and its personnel for implementation of the UFMS with respect to communications, training, and human resource requirements. The Change Management Plan will address organizational risks as outlined in the RAMP.
UFMS PMO Organization and Staffing Plan	Specifies organizational and staffing requirements needed to implement the new UFMS system and processes. This plan also considers organizational risks outlined in the RAMP.
UFMS Future State Enterprise Architecture	Provides a conceptual systems design for UFMS that addresses hardware, software, data and integration issues. The UFMS Future State Enterprise Architecture will incorporate technology risks and associated mitigation plans defined by HHS.
Detailed Implementation Plan	The RAMP will be an appendix to the Detailed Implementation Plan delivered at the conclusion of the Business Case and Pre-Implementation Planning task.

1.2 Purpose of the Risk Assessment and Mitigation Plan

Large, department-wide financial management system initiatives, such as the UFMS program, have various inherent risks associated with them. Past experience, both in the private and government sectors, conclusively indicate that many such system initiatives fail to achieve their envisioned goals and the initiatives themselves may be terminated after the investment of large amounts of funds and other departmental resources due to project risks that were not effectively nullified.

The purpose of the UFMS RAMP is to clearly define the processes and responsibilities involved in risk assessment and mitigation so that risks can be managed and controlled to the greatest extent possible. The RAMP identifies planned risk management activities, how the activities are to be executed, and who is responsible for ensuring that the risk management process succeeds in reducing or eliminating the impact of risk on the UFMS implementation. This initial version of the RAMP focuses on core financials--the first business area being implemented under the UFMS program. However, the risk management processes and procedures outlined in this document apply to the implementation of other business areas as each is initiated and implemented.

In the context of a financial management system initiative, risks represent factors or elements that interject uncertainty or detrimental impact in management's ability to successfully carry out the initiative. Many varying risk factors exist or may arise during a financial management system effort. For example, the failure to involve an agency's Chief Information Officer (CIO) community in a financial management system effort -- often viewed by agency executives as a sole Chief Financial Officer (CFO) responsibility -- will significantly reduce the likelihood of a successful implementation. Coordination between CIO and CFO offices is essential to ensuring that the necessary technical infrastructure resources are in place (both staff and equipment) to support implementation and post production operations.

The UFMS Program is a large-scale systems integration effort. The system will eventually support thousands of users processing millions of transactions annually from numerous sites across the country. In addition, the UFMS implementation will require coordination with multiple autonomous HHS component agencies, a number of which currently operate their own financial systems.

Many risks or negatively impacting factors can be reliably predicted for a major financial system effort. Therefore, a system PMO—with the assistance of its systems integrator—can plan for and readily devise mitigation procedures for such "common" or inherent risks and factors. The following are several

examples of significant risks that are inherent to projects of the size and complexity of the UFMS effort:

Competing demands for staff resources: Management must be willing to dedicate the absolute resources entailed by a major system effort. The UFMS program requires the dedication of a significant number of skilled staff resources, both at the PMO and site implementation team levels. HHS needs to dedicate a combination of Office of the Secretary (OS) and component agency staffs to provide the necessary level of subject matter expertise. Without these resources in place, HHS will encounter difficulties in completing the complex implementation tasks at hand. Therefore, HHS upper management must create and sustain buy-in from end-users across HHS and its component agencies.

"Scope creep": Failure to clearly define the scope of a major systems project--and "stick to" the defined scope--is a serious risk to the success of the project. Such risk is particularly acute with complex department-wide implementations. "Scope creep" occurs when significant changes are made to the original implementation plan, usually resulting in additional cost and extension of deadlines. Examples of "scope creep" include additions to the original functional requirements, customizing the software instead of accepting modifications to existing policies and procedures, and designing and building interfaces to lower-priority systems. Skillful program management and top management support is key to preventing scope creep. To mitigate this risk, HHS should establish a clearly defined scope for the UFMS initiative. This scope should be communicated clearly and consistently from the top departmental echelons to the lower management levels, so that all stakeholders have a clear understanding of the functions and capabilities that the system will provide. The scope should be supported by a set of guiding principles for the program (e.g., policy of no software customizations) that defines the basic ground rules that guide the implementation approach. Finally, HHS should establish a change control process that requires formal approval of changes to scope before they are implemented.

Data conversion and associated data clean-up: Converting and cleansing financial and related data in legacy systems for input and integration into a new system often poses serious risks and challenges for Federal agencies**.** Since data structures, code descriptors, and business rules may be significantly different between legacy systems and the new financial management system, data may not be directly compatible and easily converted to the new system formats and architecture. Significant amounts of data mapping, manipulation and "cross-walking" may be required, thereby increasing the risk of compromising data integrity. Also, Federal financial system implementations typically have large amounts of data to be converted (e.g., open obligations, open receivables, general ledger balances, historical information, vendor tables, etc.) resulting in various data integrity issues. Therefore, the data conversion tasks must be

planned carefully to take into consideration the complexity of the data mapping required, and the extent of data clean-up needed.

1.3 Components and Attributes of Viable Risk Management Programs

Successful risk management programs incorporate specific components and attributes. Following are a number of the more prominent components/attributes:

Quantitative Tools – Risk assessments using quantitative tools allows managers to categorize and prioritize risks based on established priority rating criteria. Such tools facilitate tracking risks and monitoring any follow-on mitigation planning activities, thereby providing senior and/or key management officials the ability to establish and identify "trigger points" (i.e., conditions that cause management to initiate mitigation actions) and milestones with which to plan contingencies.

Reporting and Escalation – A hierarchical structure must be in place to consistently and reliably identify who (or what organization) "owns" (i.e., is responsible for) the risk, who (or what organization) establishes pertinent risk mitigation strategy(s), and what personnel within the organization(s) are responsible for implementing risk mitigation.

Proactively Identifying Risk – Risk identification and analysis must occur continuously throughout the project's lifecycle, primarily via periodic and recurring formal meetings and reviews by agency management. Necessarily, the process for identifying risks should be clearly defined and communicated to each member of the project team.

Accountability – To be effective, a risk management program must establish clear accountabilities for the various facets of the program. One of the most commonly recurring themes of failed risk management programs is poor follow through--that is, risks may be clearly identified and viable mitigation plans developed, but lack of focus or accountability precludes the successful abatement of the subject risk.

Practicality – The processes and activities contained in the risk management plan must be relatively easy to follow and implement, or the risk assessment and mitigation action will fail to mitigate the risks. Furthermore, cumbersome and ill-defined processes will allow risks and negative factors to impact the project, often without warning. The processes must be relatively simple, logical, and feasible for all project team members to implement and follow.

The UFMS RAMP incorporates these key components and attributes to provide a robust, but implementable, risk management process for the UFMS program. This document provides specific coordination and administrative guidance and information on risk management issues for all management levels involved in the

UFMS program. HHS and KPMG Consulting participants in the UFMS implementation effort are to use this document as the guide for carrying out risk management activities throughout each phase of the program.

* * * * *

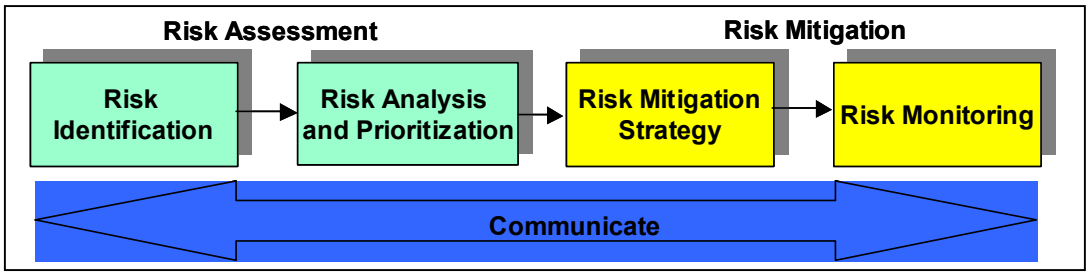
The remainder of this document describes the UFMS risk management process. Section 2 provides an overview of the UFMS risk management methodology followed by a high-level discussion of how risk management activities will be integrated into the UFMS organizational structure. Each of the remaining subsections then provide a more detailed discussion of the approach for completing each stage of the methodology and the roles and responsibilities of HHS and KPMG Consulting in each phase.

2.0 Risk Management Approach

2.1 Overview of Risk Management Phases

The UFMS project team, including HHS and KPMG Consulting personnel, will implement a continuous risk management process intended to minimize risk impact. The risk management approach entails two major processes--risk assessment and risk mitigation. Risk assessment includes activities to identify risks, and analyze and prioritize them. Risk mitigation includes developing risk mitigation strategies and monitoring the impact of the strategies on effectively mitigating the risks. Figure 2-1 depicts the continuous risk management process that will be applied within the UFMS program as part of overall implementation. Though discussed separately in this document, it should be noted that several steps in the risk management process may be completed simultaneously (for each identified risk). Sections 2.3 through 2.6 provide a more in-depth discussion of how each of these processes or "stages" will be implemented for the UFMS program.

Figure 2-1: Continuous Risk Management Process



Risk Identification -- Risk identification consists of initial identification at the onset of the program, as well as continuous risk identification throughout the life of the program.

Risk Analysis and Prioritization – Analyzing risks consists of formal evaluation of the impact to the UFMS program that an individual risk presents. Based on the results of the evaluation, risks are then prioritized for mitigation based on the severity or magnitude of the potential impact and probability of occurrence.

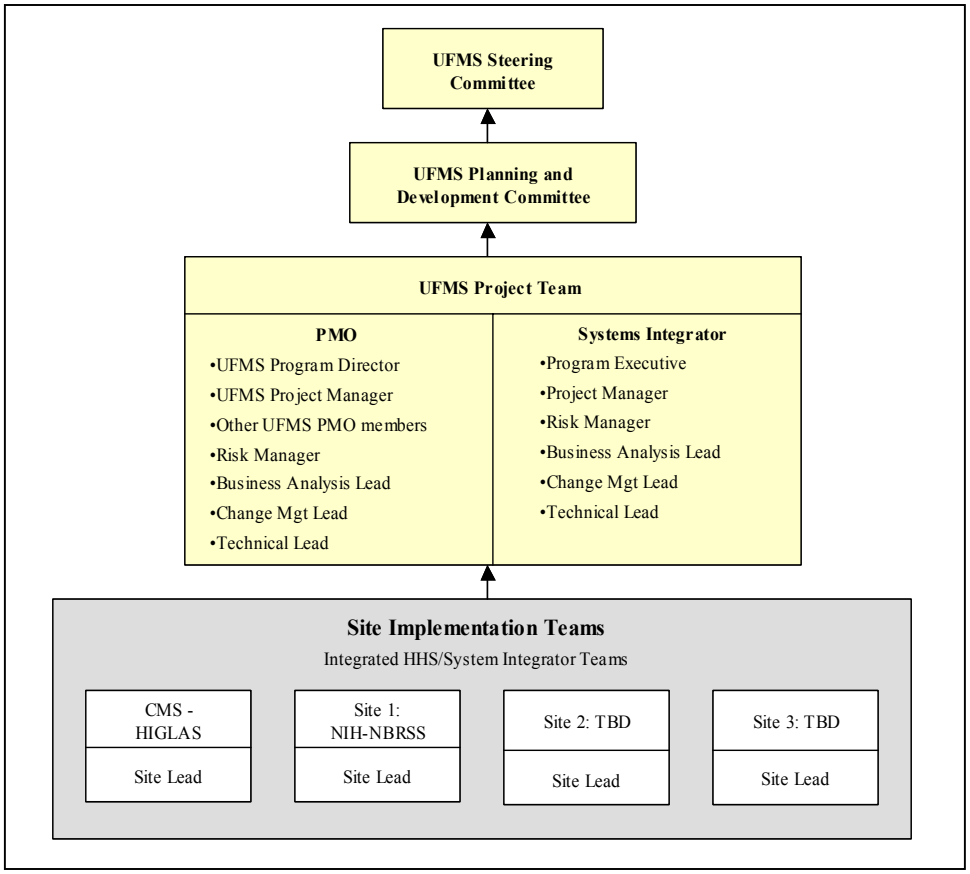
Risk Mitigation Strategy – For each specific risk or group of risks identified and prioritized, an effective mitigation strategy must be devised. A response to the risk is identified and a mitigation strategy is established to address how to eliminate the risk or reduce the risk's impact on the project. The detailed action(s) to be taken per the strategy is/are directly related to the assigned priority of the risk. The mitigation strategy also includes a contingency action(s) in case the initial mitigation actions are not effective and a different approach must be taken.

Risk Monitoring – The status and effectiveness of risk mitigation strategies is reviewed regularly to ensure that the risk's impact is minimized and that the mitigation strategies achieve the desired results. Risk monitoring also allows for risk closure once it is determined that the risk no longer exists or it is no longer a threat to the implementation.

2.2 Overview of Risk Management in the UFMS Program Organization

In order to be optimally effective, risk management within the UFMS program requires the coordination of various team activities and the shared understanding of risk responsibilities and authorities. Coordination among the multiple UFMS project teams will help ensure that the UFMS Program Director is apprised of all identified risks and the status of their associated mitigation activities. HHS and KPMG Consulting personnel will collaborate throughout the risk management process to jointly assess and mitigate risks. Figure 2-2 provides a high-level overview of the UFMS program organization structure as related to risk management.

Figure 2-2: UFMS Program Organization as related to Risk Management



The following sections describe the roles that each UFMS organizational component plays in the risk management process, including descriptions of information that is to be exchanged throughout the organizational hierarchy. Further details regarding specific responsibilities during each phase of the risk management process are provided in sections 2.3 through 2.6. These sections also describe the division of roles and responsibilities between HHS and KPMG Consulting.

- UFMS Steering Committee – The UFMS Steering Committee has executive-level responsibility for managing risks within the UFMS program. The Steering Committee will work closely with the UFMS Planning and Development Committee and the UFMS PMO to understand which risk factors pose the greatest threat to the UFMS program and what executive-level action is needed to manage these risks.

- UFMS Planning and Development Committee – The UFMS Planning and Development Committee will work closely with the UFMS PMO to assist in identifying and mitigating risks that require the involvement of Department senior management.

- UFMS PMO – The UFMS PMO will serve as the central point of coordination for all risk management activities related to the UFMS program, including the ongoing implementations at Centers for Medicare and Medicaid Services (CMS) and the National Institutes of Health (NIH). The UFMS PMO will work closely with the KPMG Consulting Program Executive and Project Manager in carrying out risk management duties. The UFMS PMO will assign a Risk Manager. KPMG Consulting will also assign a Risk Manager to work with the UFMS Risk Manager in coordinating all risk related tasks, including communications with implementation team members and component agency representatives. The UFMS Risk Manager and the KPMG Consulting Risk Manager will also maintain a single, centralized risk management database that includes all identified risks associated with the UFMS program. The centralized risk database will be maintained using the UFMS e-Projects toolset. While only the KPMG Consulting Risk Manager and UFMS PMO members will update risk information in e-Projects, other UFMS team members (e.g., risk owners[1]) will have access to e-Projects to view their risks data on-line.

  The UFMS PMO and KPMG Consulting will assign personnel to serve as track leads for business analysis, change management and technology from both HHS and KPMG Consulting. UFMS track leads will be responsible for developing the UFMS global design and will help oversee the implementation of the system across component agencies. The track leads will support the UFMS PMO in identifying, mitigating, and monitoring UFMS issues and risks. During the implementation phase, the track leads will also work with the site implementation teams to identify issues that cannot be resolved at the site level, and therefore need to be escalated to the PMO as a risk. Section 2.3 further describes the process for escalating issues to risks and provides an example of when this would occur.

- Site Implementation Teams – As the UFMS program moves from the planning phase to implementation, various site implementation teams will be deployed to the component agencies. Each team will be comprised of lower-level change management, functional, and technical implementation teams. These implementation teams will be managed by designated HHS and System Integrator site leads who will be the primary points of contact for managing risks at their respective sites. The site leads will be responsible for escalating critical issues as potential risks to the UFMS PMO for evaluation and consideration.

  For purposes of this document, “site implementation” refers to any location where the UFMS will be deployed, including NIH and CMS. Risks identified by the NIH/NBRSS PMO (NIH site implementation team) will be integrated into the UFMS risk management process. The UFMS project team will work

[1] As discussed later in this document, a “risk owner” is the individual with the greatest ability to positively impact (i.e., nullify/mitigate) a risk.

with the NIH site implementation team to identify risks identified on the NIH project to date and any future risks that may be identified. Pertinent information regarding these risks will be entered into the centralized UFMS risk management tool that will be accessed by NIH site implementation team members. Moving forward, the NIH site implementation team will follow the standard issue/risk management process described in this document and will coordinate all risk management activities with the UFMS PMO.

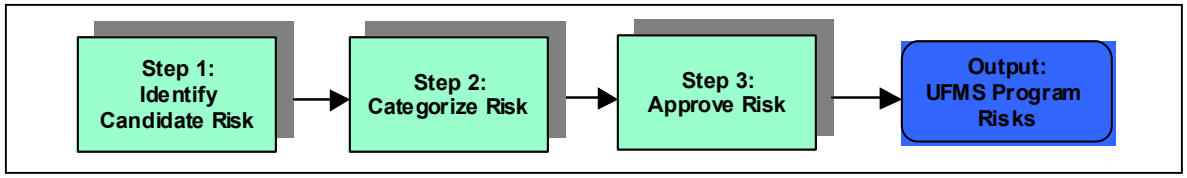
Risks on the CMS HIGLAS project will also be coordinated with the UFMS PMO, but will not be managed using the centralized UFMS e-Projects risk database. The CMS site implementation lead will communicate their risks to the UFMS Program Director and UFMS Risk Manager on a periodic basis and discuss any potential impacts to the overall UFMS Program. The UFMS Program Director is responsible for communicating any critical CMS risks to the UFMS Planning and Development Committee (and UFMS Steering Committee as needed) so that any senior management response can be coordinated.

2.3 Risk Identification

The initial stage of risk management is Risk Identification. Risk Identification is the process of capturing and defining specific factors that can negatively impact the UFMS Program if not properly managed. This section discusses the basic steps of Risk Identification and how this stage is addressed by the UFMS program organization structure.

The UFMS PMO, assisted by KPMG Consulting, is tasked with proactively identifying risks that could have a potential negative impact on the UFMS program. Risk Identification is executed as a three-step process, as depicted in Figure 2-3 .

Figure 2-3: Risk Identification Steps



Step 1: Identify Candidate Risk

As the UFMS program progresses, risks will be identified from a variety of forums and sources. The following list summarizes some of the possible sources and forums for risk identification.

Baseline Risk Identification workshops – Following HHS management approval of this plan, KPMG Consulting, with input from the UFMS PMO, will

develop a list of preliminary UFMS baseline risks. This list will identify known risks from industry and government experience on other large-scale systems integration projects. KPMG Consulting will coordinate this list with the UFMS PMO and incorporate feedback, as necessary.

Weekly/monthly UFMS PMO status meetings – At these meetings the UFMS PMO members will discuss the status of current program risks as routine agenda topics. During these discussions, attendees may also identify new risks that have resulted from changes to the environment surrounding and/or impacting the UFMS implementation. These new risks may originate from the IV&V contractor, or from other parties such as the Office of Management and Budget (OMB), General Accounting Office (GAO), HHS Inspector General (IG), and others.

Monthly UFMS Planning and Development Committee meetings – Committee members may identify risks not previously identified by the UFMS PMO or KPMG Consulting. The UFMS Project Manager will work with the relevant committee member(s) to collect the necessary details and fully document any risk, so identified.

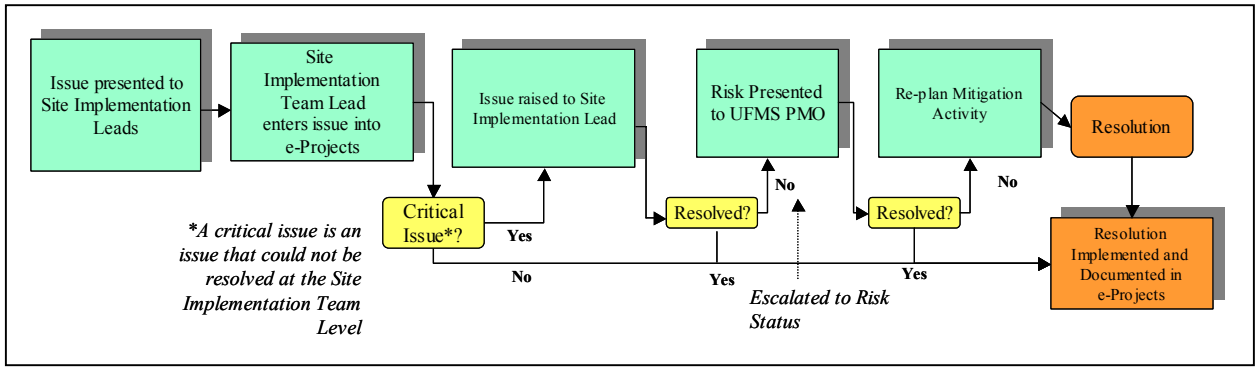
Status meetings between the HHS UFMS Program Director, HHS UFMS Project Manager and the UFMS Site Leads - At these meetings, the UFMS site implementation leads will discuss issues that could not be resolved at their respective sites, and therefore need to be escalated to the UFMS PMO as candidate risks. Both KPMG Consulting and HHS site implementation leads (including CMS leads) will attend these meetings. The meeting participants will discuss the specific circumstances that led an issue to be escalated and determine the degree of impact that the issue will have on the overall UFMS implementation if not addressed.

Figure 2-4 depicts the process for escalating issues to risks on the UFMS program. As shown in this figure, issues will be managed and tracked by each of the UFMS site implementation teams. The process begins with an issue being raised by a UFMS site implementation team member to their respective leads (i.e., business, technical, or change management leads). The site implementation team leads will then be responsible for assigning issues to the appropriate team member for resolution, and following up to ensure that the issues are resolved in a timely manner. Related to the UFMS program, issues are those items identified by the site implementation teams or the global design team that may negatively affect project milestones or activities, but can be resolved at the site implementation team level. As with risks, issues will be entered and tracked in the e-Projects toolset, but in a separate part of the application.

Critical issues are those issues that cannot be resolved directly by the site implementation team leads. These issues will be raised to the overall site implementation lead who will determine whether or not the issue may negatively

impact the overall UFMS program if not resolved. Issues having a potential program-wide impact will be escalated as risks to the UFMS PMO and will be defined and managed using the processes outlined in this document.

Figure 2-4: Issue Resolution/Escalation Process



The following example illustrates the process depicted above. During the design phase of the UFMS program, site implementation teams will perform Conference Room Pilots[2] (CRPs) to configure and test the software package. Through this process the teams may identify "bugs" in the baseline software that must be addressed by the software vendor. When a software "bug" is identified, the site implementation team will create an issue in e-Projects and request technical support and/or "patches" from the vendor. The implementation team will monitor the issue based on the severity of the "bug" and the timing and adequacy of the vendor response. If the "bug" is severe (e.g., HHS can not perform a key function such as generate a key report) and the vendor does not have a near-term resolution for the problem, the issue would be escalated by the site implementation lead to the UFMS PMO as a risk. In this example, the risk could be described and entered into the risk management automated tool as follows:

The selected UFMS Core Financial System Software package is not able to support key reporting functionality required by HHS due to unanticipated bugs in the baseline software code. The software vendor has communicated to HHS that these bugs will not be corrected until the next major software release, which will occur after the first site is scheduled to go live. If the software vendor does not address these bugs earlier, the UFMS implementation schedule will be significantly delayed.

Step 2: Categorize Risk

Once a risk has been identified, the HHS UFMS Risk Manager--working with the KPMG Consulting Risk Manager--will classify the risk into one of six categories

[2] Conference Room Pilots are designed tests of packaged software using business data in a controlled environment. The results provide information required to develop an implementation plan and serve as an indicator of the "gaps" between the software's capabilities and the business needs of the implementing organization.

(described in Table 2-1). These categories help the UFMS project team organize the risks into logical groupings and provide some indication regarding whom in the UFMS program organization should be involved in the risk mitigation. For example, cost and schedule risks will most often be addressed directly by the UFMS PMO and/or KPMG Consulting Project Management team, whereas, organization risks will often be assigned to the Change Management team. Table 2-1 lists the risk categories that will be used for UFMS.

Table 2-1: UFMS Risk Categories

Risk Categories	Description	Example Risk
Funding/Cost	Risks associated with the ability to obtain adequate funding for a project and deliver required products within budget	Not receiving UFMS project funding as requested could result in project interruption or stoppage (funding risk). Expending more on the project than budgeted may cause management to curtail the effort (cost risk).
Schedule	Risks associated with the ability to deliver required products on time	A significant delay in the software acquisition could impact the technical component of the detailed implementation planning for UFMS.
Organizational	Risks associated with the ability to deliver required products to the component agencies/HHS organizations	Parallel HHS initiatives (e.g., Grant and Procurement Cross-Functional Teams) could put a strain on available component agency staff resources.
Sponsorship	Risks associated with the ability to deliver required products with the needed sponsorship	Lack of continuing sponsorship across administrations could slow down or stop UFMS implementation.
Information Technology	Risks associated with the ability to deliver required technological products and expected functionality, positive customer perception and adequate supportability	UFMS will need to interface with a large number of systems at both the Department and agency levels. Several of these interfaces may require complex crosswalks to legacy data structures (e.g. Common Accounting Number). If not designed correctly, the UFMS implementation schedule will be impacted.
External	Risks associated with external events outside the control of HHS	The U.S. Treasury is currently redesigning the U.S. Standard General Ledger (USSGL) and may require agencies to implement a 10-digit code, verses the current 4-digit code. If mandated, this change in the regulation could entail rework to the UFMS architectural design. Furthermore, such a change will almost surely have significant impact on the design and architecture of HHS administrative systems that "feed" financial data to the UFMS core function.

The UFMS Project Manager or his designated UFMS Risk Manager will serve as the central point of coordination for defining all risks associated with the UFMS program. The UFMS Risk Manager and the KPMG Consulting Risk Manager will work with the appropriate UFMS team members to collect the information needed to document the risks. The UFMS Project Manager will review each candidate risk for validity and instruct the UFMS Risk Manager and KPMG Consulting Risk Manager to collect additional information, as required. The Risk Identification Form (see Appendix C) identifies the data needed to properly document a risk.

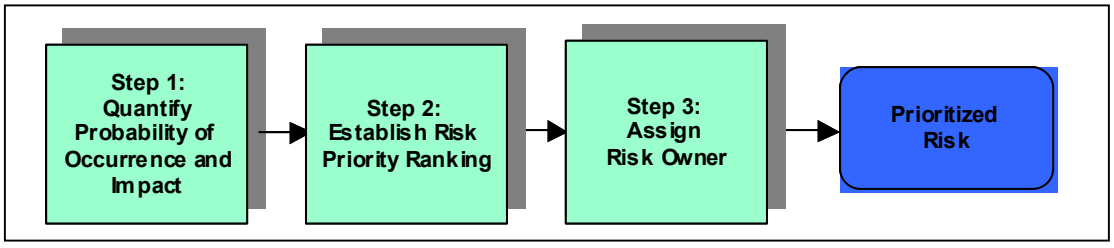
Step 3: Approve Risks

Once a risk has been fully documented, the HHS UFMS Project Manager will present the risk to the UFMS Program Director for final approval. The UFMS Program Director will provide any comments or observations he deems necessary before the risk is passed on to the KPMG Consulting Risk Manager to be entered into the e-Projects risk repository (see Appendix B for a depiction of the e-Projects risk management tool).

2.4 Risk Analysis and Prioritization

Risk analysis and prioritization entails quantifying the impact of a risk on the UFMS program. Once risks have been identified, the UFMS Project Manager will work with other members of the UFMS PMO, the risk originator, the KPMG Consulting Risk Manager, and KPMG Consulting Program Executive and Project Manager to analyze and prioritize the risks. As needed, the UFMS Project Manager or his designated UFMS Risk Manager will also coordinate with track leads, site implementation leads, and other risk related individuals to obtain input needed for risk prioritization and classification. Three basic steps are involved in the risk analysis and prioritization process, as depicted in Figure 2-5.

Figure 2-5: Risk Analysis and Prioritization Steps



Step 1: Quantify Probability of Occurrence and Impact

The HHS UFMS Risk Manager and KPMG Consulting Risk Manager will quantify the probability that the risk will impact the UFMS effort based on subjective analysis of all factors associated with the risk. Close coordination with the UFMS team member that originated the risk is needed to define appropriate risk

probability and impact scores. Table 2-2 provides example probability criteria for each type of risk category. Table 2-3 provides guidance on possible impact criteria that is to be used in this evaluation.

Table 2-2: Probability of Risk Occurrence

Risk Category	High Level Risk	Improbable 1	Probable 2	Frequent/Expected 3
Funding/Cost	HHS may not receive UFMS funding as requested, which may result in project interruption or stoppage.	Funding for future phases of the project has been approved and is in place.	Some funding for the future phases of the project has been approved and is in place.	No funding for future project phases has been approved.
Schedule	Underestimating the scope of the UFMS tasks to be completed and/or the required timeframe to complete these tasks will result in schedule slippages.	The schedule of the project is conservative and the scope of the project is not complex.	The schedule of the project is conservative but the scope of the project is complex.	The schedule of the project is aggressive and the scope of the project is complex.
Organizational	If change is not effectively planned for and managed, users may not be willing to accept new business processes implemented with the new system.	Only minor change is required to implement the project.	Moderate change is required to implement the project.	Major change is required to implement the project.
Sponsorship	Lack of continuing HHS executive-level sponsorship and commitment could slow down or stop the UFMS implementation.	The project is supported by senior management and they are actively involved in the project.	The project is supported by senior management, but they are not actively involved in the project.	The project is not fully supported by senior management.
Information Technology	Lack of technical skills and training may negatively impact HHS' ability to deploy the system.	The information technology being implemented is mature in the marketplace and in-house expertise exists	The information technology being implemented is mature in the marketplace but no in house expertise exists	The information technology is immature in the marketplace and no in house expertise exists
External	Lack of support from oversight agencies such as OMB and GAO will impact HHS' ability to sustain funding for the UFMS Program.	Oversight agencies strongly approve of the project scope and objectives	Oversight agencies somewhat approve of the project scope and objectives	Oversight agencies disagree with one or more aspects of the project scope and objectives

Table 2-3: Consequences of Impact

Impact Rating	Impact Value	Impact Description
High	3	Likely to cause significant disruption to schedule, cost, performance, or quality even with sufficient support from project team and contractors.
Moderate	2	Has the potential to cause disruption to schedule, cost, performance, or quality even with sufficient support from project team and contractors. Potential problems may be overcome with additional planning and other mitigating activities.
Low	1	Has the potential to cause some disruption to schedule, cost, performance, or quality. Normal effort by the project team and contractors will probably overcome most difficulties.

Step 2: Establish Risk Priority Ranking

Once the assessment of the risk probability and impact is complete, risks are to be prioritized using the matrix shown in Figure 2-6.

Figure 2-6: Sample Risk Matrix

Impact	Risk Priority			
	High 3	3-1	3-2	3-3
	Moderate 2	2-1	2-2	2-3
	Low 1	1-1	1-2	1-3
		Improbable 1	Probable 2	Frequent/ Expected 3
	Probability			

- Risks coded as “red” are of the highest priority concern to the UFMS program. Such risks indicate the existence of factors that are likely to have a significant negative impact to the progress of the UFMS implementation if not effectively and timely mitigated. The KPMG Consulting Risk Manager will contact the risk owners on a weekly basis to monitor status of risk mitigation and contingency planning activities. Status of “red risks” will be reviewed at weekly and monthly UFMS PMO status meetings and will also be reported by the HHS UFMS Program Director to the UFMS Planning and Development Committee on a monthly basis. “Red risks” that have a priority ranking of 3-3 will also be reported to the UFMS Steering Committee on a quarterly basis.

- "Yellow" risks imply moderate impact to the UFMS program if the risk materializes. The UFMS Project Manager or his designated UFMS Risk Manager, working with the risk owner, will define and implement a mitigation strategy and contingency plan for all "yellow" risks. The KPMG Consulting Risk Manager will contact the risk owners on a monthly basis to monitor status of risk mitigation and contingency planning activities. "Yellow" risks will be reviewed at the monthly UFMS PMO status meetings.

- "Green" risks are lower priority risks that require less frequent assessment than "yellow" and "red" risks. A mitigation strategy will not be defined for these risks. Instead, the risk owners will need to review "green" risks to ensure that their impact or probability has/does not become more severe, thereby warranting a rating of "yellow" or "red." The UFMS Risk Manager and the KPMG Consulting Risk Manager will review the status of "green" risks with risk owners on a monthly basis and report any changes in their status to the UFMS Program Director.

Upon completion of risk analysis and prioritization, the KPMG Consulting Risk Manager will update e-Projects to specify and electronically document the risk's assessed probability, impact, and priority.

Step 3: Assign Risk Owner

After the risk priority has been defined, the UFMS Program Director will identify and assign risk owners (one each from HHS and KPMG Consulting). The risk owners are the individuals with the greatest ability to positively impact the risk outcome and are responsible for effective mitigation actions. For "yellow" and "green" risks, the risk owners will most often be the track leads or UFMS site implementation team members from HHS and KPMG Consulting. For "red" risks, the UFMS Program Director will coordinate with the UFMS Planning and Development Committee to determine and designate the most appropriate risk owner. Such risks may be assigned directly to a member of the UFMS PMO or to another agency senior manager, depending on the required mitigation activity. For example, risks associated with obtaining necessary funding may require coordination with external oversight agencies and/or the Congress to implement the necessary mitigation actions.

2.5 Risk Mitigation Strategy

The UFMS PMO will implement risk mitigation procedures, as warranted, and report results of mitigation actions for high priority risks ("red") to the UFMS Planning and Development Committee on a monthly basis. Risk mitigation entails effecting means to reduce a risk's impact on a project. During this stage, the risk owner develops a strategy to reduce the impact of the risk on the

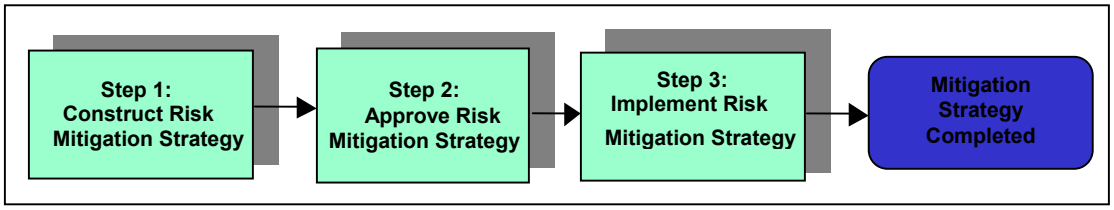
project. The goal is to prevent the risk from materializing or, if a risk occurs, guide organizational resources to appropriately respond to it.

The strategy should define the following:

- Detailed activities required to mitigate the risk. Such activities include changes in processes, changes in technical approach, and increased communications with key stakeholders, etc.
- Thresholds and "trigger points." These attributes, established in advance by the UFMS project team, define when the mitigation strategy must be set in motion to keep the risk from materializing. For example, to mitigate the risk of inadequate staff resources, a date should be specified for when key staff needs to be assigned to the UFMS program.
- Specific personnel responsible for executing the mitigation activities.
- Conditions under which the risk will no longer be considered a threat to the project (i.e., closure criteria).

The UFMS Risk Mitigation Strategy process is summarized in Figure 2-7.

Figure 2-7: Risk Mitigation Strategy Steps



Step 1: Construct Risk Mitigation Strategy

The purpose of the risk mitigation strategy is to reduce either the risk probability or the risk impact--or both--thereby reducing the overall threat that the risk poses to the UFMS program. Feasible risk mitigation strategies are designed to be concise, action-oriented, easy to understand and monitor. The risk owner should take into account the following considerations in developing any risk mitigation strategy:

- Current risk status – the current probability, degree of impact, and priority ranking of the risk.
- Existing preventative actions – any mitigation activities that have already been initiated and their impact.
- New preventative actions – additional mitigation activities that must be taken to reduce or nullify the negative implications of the risk.
- Contingency plans – steps that must be taken if the initial risk mitigation strategy is not successful.

- "Trigger points" for actions and contingency plans – conditions or parameters which would cause the risk owner to begin implementing these activities.
- Time correlation – the initiation date, expected number of days to resolution or activity due dates, and completion date.
- Closure criteria – conditions under which the risk is no longer considered a threat.

Table 2-4 provides an example mitigation strategy for a technical risk associated with the UFMS program.

Table 2-4: Example Mitigation Strategy

Mitigation Strategy Component	Description
Description of Risk	UFMS will need to interface with a large number of systems at both the Department and component agency levels. Several of these interfaces may require complex crosswalks to legacy data structures (e.g., Common Accounting Number). If interfaces are not designed correctly, the UFMS implementation schedule will be adversely impacted.
Current Risk Status	This is a new risk. It has been assigned a probability of 3 and an impact of 2 resulting in a priority rating of 2-3 (red).
Existing Preventative Actions	The UFMS team is currently reviewing all systems that interface with current agency core financial systems. This analysis will result in a comprehensive inventory that must be evaluated for possible interfaces to the UFMS core financial system.
New Preventative Actions	■ Develop detailed interface planning document that describes each interface, type of data transferred, interface mode (i.e., batch, online), etc. This document should identify whether or not the interfacing system is currently in development. Obtain sign-off from interface system owners. ■ Establish Interface Definition Agreements for each system that fully outline interface processing requirements for source versus target system and how and when data will be transferred. Source and target system owners should sign these agreements. ■ Explore the use of a middle-ware package and other enabling technologies to streamline the interface design and development process. ■ Develop and implement comprehensive unit and integration test plans for each interface.
Contingency Plans	Develop manual procedures for those interfaces that cannot be developed in time for testing. These procedures will include steps to ensure that data from the source and target system remain in synch until an automated interface can be developed.

Mitigation Strategy Component	Description
Trigger Points	Risk mitigation activities will begin at the start of the Design, Build and Test phase of the UFMS project and continue through the deployment phase for each site implementation. The contingency plan will be implemented on an interface-by-interface basis. Manual procedures must be developed for any interface that has fallen two weeks behind the planned implementation schedule.
Time Correlation	The initiation date would be the start date of the Design phase. Risk mitigation activity due dates would be established appropriately. Completion or closure date would be determined by completion of risk mitigation, contingency plan or other closure criteria.
Closure Criteria	This risk will not be closed until the UFMS is fully implemented and operational. The probability and impact of this risk may be updated based on the progress of associated implementation tasks.

Appendix C provides a sample template to be used by risk owners to define the mitigation strategy. This document identifies the risk response, mitigation milestones, due date for activities, closure criteria, contingency plan, and contingency plan triggers.

Step 2: Approve Risk Mitigation Strategy

Once the mitigation strategy is defined, the risk owner will present the information to the UFMS Project Manager, or his designated UFMS Risk Manager, for review and approval. Once the Mitigation Strategy has been approved, the Risk Manager documents the information in the e-Projects risk database. The risk owner will have read-only access to e-Projects to review updates to risk records which have been assigned to them.

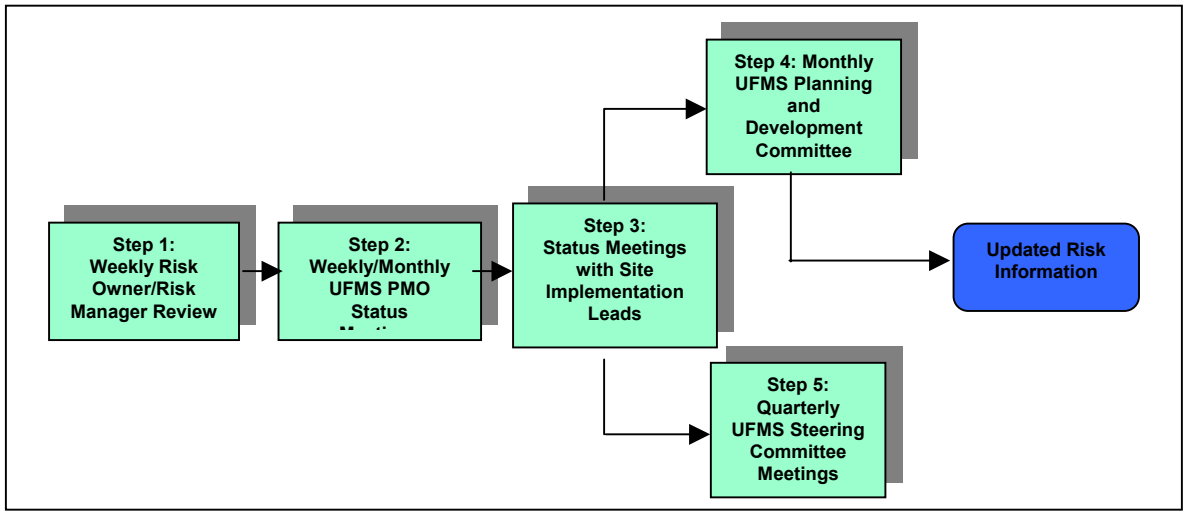
Step 3: Implement Risk Mitigation Strategy

Once the mitigation strategy has been approved, the risk owner and other key personnel will implement the mitigation activities or contingency plan accordingly. This will include monitoring, reviewing, and managing the progress of risk mitigation and contingency planning activities; and the status of the risk. After the appropriate risk response has been identified, and a strong set of risk management activities are established, risk monitoring--can begin.

2.6 Risk Monitoring

Risk monitoring ensures that risk management is a closed-loop process by tracking risk mitigation progress and applying corrective action. Figure 2-8 depicts the steps required in the Risk Monitoring phase:

Figure 2-8: Risk Monitoring Steps



The UFMS Risk Manager and the KPMG Consulting Risk Manager will review the status of "red" risks with risk owners on a weekly basis. "Yellow" risks will be reviewed less frequently (i.e., monthly). The purpose of these meetings will be to assess the progress of risk mitigation activities and to identify any updates to the status of each risk. These meetings may be held in person, by phone, video-teleconference, or via email. "Green" risks will also be reviewed monthly, but only to identify if conditions have changed to warrant an update to the priority rating.

The risk owner will address the following during these meetings:

- Evaluation of the effectiveness of risk mitigation activities being implemented
- Recommended changes to risk mitigation strategy based on lack of effectiveness or changes in the risk environment
- Recommended updates to the priority of the risk based on the revised assessment of probability or impact
- Recommended updates to the timeframe required to implement mitigation response
- Recommended updates to the status of the risk from active to closed. The risk closure worksheet provided in Appendix C includes the type of information that should be documented by the risk owner to close the risk. When a risk owner believes a risk should be closed, he or she will submit this information to the UFMS Risk Manager and the KPMG Consulting Risk Manager who will discuss the recommendation with the UFMS Program Director and UFMS Project Manager. The UFMS Program Director has final approval authority for closing a risk.

The KPMG Consulting Risk Manager will document the results of all meetings in a file attached to the printed risk record from the e-Projects risk database.

Step 2: Weekly/Monthly UFMS PMO Status Meetings

The UFMS project team will meet on a weekly and monthly basis to discuss the status of the UFMS program. In preparation for these meetings, the KPMG Consulting Risk Manager will meet with the UFMS Project Manager, or the designated UFMS Risk Manager, to review the information collected from the risk owners. After making any necessary updates in e-Projects, the KPMG Consulting Risk Manager will run a status report in e-Projects that summarizes all outstanding risks based on their priority (a sample e-Projects report is provided in appendix E). The UFMS PMO will review the status of mitigation activities and identify any areas where additional action is needed and/or the status of risks should be updated. Based on the outcome of the meetings, the UFMS Risk Manager or the KPMG Consulting Risk Manager will communicate any updates to the risk owners and update e-Projects. The UFMS PMO will review all "red" risks at the weekly meetings. Both "yellow" and "red" risks will be reviewed at the monthly status meetings.

Following each meeting, the UFMS Project Manager or his designated UFMS Risk Manager and the KPMG Consulting Risk Manager will summarize all high priority risks ("red") for discussion at the UFMS Planning and Development Committee monthly meeting.

Step 3: Status Meetings with Site Implementation Leads

On a periodic basis—but no less than monthly, the UFMS Program Director and UFMS Project Manager will meet with the component agency site implementation leads to coordinate the activities at the respective locations into the overall UFMS implementation. An agenda item for such meetings will be discussion of risks assigned to each site, including status of mitigation activities. The primary purpose of these meeting is for the UFMS Program Director and PMO members to understand whether risks are being properly controlled during the site implementation and to identify areas where risks may be starting to impact program-wide cost and/or schedule. These meetings will be attended by site leads from all HHS component agencies where UFMS is being implemented, including CMS.

Step 4: Monthly UFMS Planning and Development Committee Meetings

During the UFMS Planning and Development Committee monthly meetings, the UFMS Program Director, or his designated UFMS Risk Manager, will report on all high priority (i.e., "red") risks and how they are being mitigated. Based on information provided, the committee will make recommendations to the UFMS Program Director on assignment of risk ownership, mitigation strategies and plans, timelines for action, etc. The committee may also identify new program-wide risks as new threats to the UFMS program arise or are discovered. Finally,

the committee will support the PMO in coordinating executive-level involvement in mitigating high-priority program risks, when necessary.

Step 5: Quarterly UFMS Steering Committee Meetings

On a quarterly basis (or more frequently if mandated by the UFMS Steering Committee chair), the UFMS Program Director will provide a briefing to the UFMS Steering Committee on the progress and status of the program. Such briefings will include a discussion outlining the status of any program risks with a priority ranking of 3-3--high-priority, high-impact. Changes to the status of a risk may result from a reassessment of assigned impact or probability, lack of effectiveness of the initial mitigation strategy, or removal of the risk as a threat to the UFMS program. The Steering Committee will consult with both the Planning and Development Committee and the UFMS Program Director/PMO to ensure that an appropriate risk owner has been assigned, and that he or she has the authority to carry out the necessary mitigation activities.

Appendix A: Acronyms and Glossary of Terms

Acronyms

ASBTF/CFO – Assistant Secretary for Budget Technology and Chief Financial Officer
CDC – Centers for Disease Control and Prevention
CIO – Chief Information Officer
CMS – Centers for Medicare & Medicaid Services
EHRP – Enterprise Human Resources Management Program
EIM – Enterprise Infrastructure Management
FDA – Food and Drug Administration
GAO – General Accounting Office
HHS – Department of Health and Human Services
HIGLAS – Healthcare Integrated General Ledger Accounting System
IG – Inspector General
NBRSS – National Institutes of Health Business Research and Support System
NIH – National Institutes of Health
OS – Office of the Secretary
OMB – Office of Management and Budget
PMO – Program Management Office
PSC – Program Support Center
RAMP – Risk Assessment and Mitigation Plan
UFMS – Unified Financial Management System

Glossary of Terms

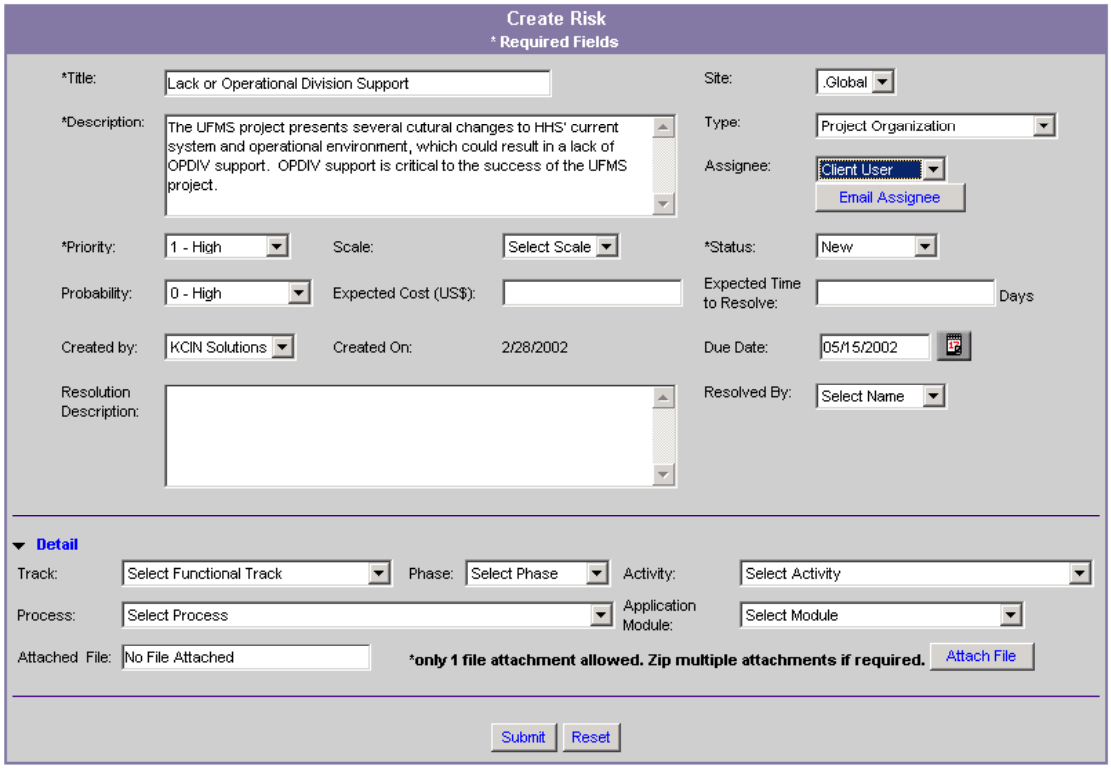
Term	Description
Activity	An action or effort of work, one level lower than a phase in KPMG Consulting's Rapid Return on Investment methodology. Activities are usually several weeks in duration and consist of smaller work steps that are used to measure completion of activities.
Impact	The negative effect on the project if the risk occurs.
Issue	A problem, a concern, an observation that requires resolution.
Mitigate	An approach that deals with risk by developing strategies and action for reducing (or eliminating) the impact, probability, or both, of the risk to some acceptable level. It may also involve shifting the timeframe when action must be taken.
Mitigation Strategy	The course of action chosen for dealing with a risk. This involves developing specific activities and timelines designed to reduce the risks impact.
Phase	Represents a major stage of the implementation lifecycle with KPMG Consulting's Rapid Return on Investment methodology. Phases are typically several months in duration and consist of lower level activities (see definition for activities above).

Term	Description
Priority	The relative importance of the risk based on probability of occurrence and degree of impact to the program
Probability	The likelihood that a risk will be realized.
Reduction	The decrease in negative impact resulting from the necessary measures taken to control a risk.
Responsibility	The quality or state of being responsible/accountable for the task of developing and implementing a risk mitigation plan.
Risk	The possibility of suffering loss or being impacted detrimentally. In a systems development and implementation project, the loss describes the impact to the project, which could be in the form of diminished quality of the end product, increased costs, delayed completion, or failure to even implement the system.
Risk Assessment	A process designated to determine what potential risks the project faces. Assessment activities include identification, analysis, quantification and prioritization of candidate risks.
Risk Identification	A process of transforming issues and concerns about the project into distinct risks that can be described and measured.
Risk Management	A software engineering practice with processes, methods, and tools for controlling risk in a project.

Appendix B: 'Create Risk' Template and Terms

Figure B-1 below depicts a sample 'Create Risk' template from the e-Project Risk Management tool.

Figure B-1: 'Create Risk' Sample Template



KPMG Consulting will update the field labels and field values on the Create Risk screen to reflect the terminology used in this document. For example, the scale field will be renamed impact to capture the assigned consequence of impact for the risk.

Table B-1 lists terms and values used in the e-Projects 'Create Risk' template. An asterisk in the field column indicates a required field.

Table B-1, Description of Fields in the Create Risk Template

Field	Description	Type	Default Value
Title*	Used to record title for a risk.	Text	
Description*	Used to record description of the risk	Memo	
Site (will be modified to identify which Agency is affected by the Risk)	Used to assign risk to a regional site	Pull-Down	Proposed values: Program-wide, NIH, CMS, CDC, FDA, etc.
Type (or Classification)	Used to identify a Risk Classification	Pull-Down	Proposed values: Cost, Schedule, Organizational, Political, Information Technology, External
Assignee (risk owner)	Used to assign risk to a team member	Pull-Down	
Email Assignee (risk owner)	Used to send email notification to the assignee (risk owner)	Button	
Priority*	Used to assign a Risk priority	Pull-Down	Proposed values: 1 through 9
Scale (or Impact)	Number ranking of the Impact assigned to the risk	Pull-Down	Proposed Values: High, Moderate, or Low
Status*	Used to assign current status of the risk.	Pull-Down	Proposed Values: New, Mitigation Strategy Defined, Closed
Probability	Used to assign a high, moderate or low probability of occurrence	Pull-Down	Proposed Values: Frequent/Expected, Probable, Improbable
Expected Cost	Used to define a dollar value of expected cost	Text	
Expected Time to resolve	Used to enter the number of days expected for resolution	Text	
Created By	Used to identify the team member who created the risk	Pull-Down	
Created On	Used to identify the date the risk was created	Date (mm/dd/yyyy)	
Due Date	Used to identify the date the risk is due to be resolved	Date (mm/dd/yyyy)	
Resolution Description	This field will be modified to capture the defined mitigation strategy	Memo	
Resolved By	Used to identify the team member who resolved the risk	Pull-Down	

Field	Description	Type	Default Value
Resolved On	Used to identify the date on which the issue was resolved	Date (mm/dd/yyyy)	
Track	Used to assign the Implementation Team assigned to the risk	Pull-Down	Proposed Values: Program/Project Management, Technical, Functional, Change Management
Phase	Used to define the major Phase of the implementation that the risk was identified	Pull-Down	Proposed Values: Prepare, Design, Build, Test and Deploy
Activity	Specific UFMS usage is to be determined.	Pull-Down	
Process	Specific UFMS usage is to be determined.	Pull-Down	
Application Module	Used to assign the specific Application Module related to the risk.	Pull-Down	
Attached file	Used to attach a file to a risk. For UFMS, this will be used to document meetings between the Risk Manager and Risk Owners	<File Name>	
Submit	Allows you to commit your changes	Button	
Reset	Resets the form	Button	

Appendix C: Risk Management Worksheets

This appendix contains the following Risk Management Worksheets:

- Risk Identification Worksheet
- Risk Mitigation Action Worksheet
- Risk Closure Worksheet

These worksheets are used to facilitate and document discussions throughout the various stages of the risk management process.

UFMS Risk Management Program Risk Identification Worksheet	
1. Risk Title (brief identifier):	**2. Due Date (date when the risk should be resolved):**
3. Risk Description (describe the risk and how it may affect the success of the UFMS implementation):	
4. Created by (Name of Person/Team Identifying Risk:	**5. Track (Technical, Functional, or Change Management):**
6. Phase:	**7. Activity:**
8. Process:	**9. Application Module:**
10. Supporting Documentation (Identify any supporting documents, spreadsheets, etc.):	

UFMS Risk Management Program Risk Mitigation Action Plan Worksheet			
1. Risk Title:	**2. Status:**	**3. Expected Time to Resolve:**	**4. Due Date:**

11A. Resolution Description (describe specific risk mitigation activities which will be employed to remove the risk or reduce the risk' impact):

Mitigation Activities (in sequence)	Individual/Team Responsible	Due Date for specific activity

11B. Resolution Description (describe closure criteria and contingency mitigation plan):

UFMS Risk Management Program Risk Closure Worksheet	
6. Risk Title:	**7. Closure Date:**
8. Resolved by: (insert Name or Team)	
9. Mitigation Activities Achieved*:	
10. Rationale for Risk Closure*:	

*The text included in these sections should be included in the Resolution Description field in e-Projects Update Risk screen.

Appendix D: Reference Documents

The following listing identifies the sources of information used to create this document:

- KPMG Consulting's Risk Management Methodology
- UFMS Task Order Management Plan
- UFMS Statement of Work (SOW)
- UFMS Governance Plan

Appendix E: Sample Risk Report

Figure E-1 depicts a sample risk report generated from the e-Project Risk Management tool.

Figure E-1 Sample Risk Report

Open Risks - Detail by Assignee

Client Name: Your Client Name
Eng. Name: Your Eng Name **Eng. No:** Your Eng Number
Site: .Global **Printed:** 2/28/2002 7:46:01AM

Assignee

Risk No.	Description	Priority	Impact	Owner	Status
Client User					
2	The UFMS project presents several cultural changes to HHS' current system and operational environment, which could result in a lack of OPDIV support. OPDIV support is critical to the success of the UFMS project.	1 - High	Client User	New	
3	Test UFMS Risk	2 - Medium	Client User	New	
4	Test UFMS Risk	1 - High	Client User	New	
5	Test UFMS Risk	2 - Medium	Client User	New	
Default User 1					
1	Description of risk	0 - Critical	0 - High	Default User 1	In Process